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10/762,264	01/23/2004	Khalil Mohamed Ali Jiraki		5535

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EXAMINER
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SIMITOSKI, MICHAEL J

ART UNIT	PAPER NUMBER
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2134

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06/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/762,264

Applicant(s)

JIRAKI, KHALIL MOHAMED ALI

Examiner

Michael J. Simitoski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-11 are pending.

#### *Priority*

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Malaysia on 1/31/2003. It is noted, however, that applicant has not filed a certified copy of the PI 2003 0377 application as required by 35 U.S.C. 119(b).
3. It is noted that this application appears to claim subject matter disclosed in prior Application No. PI 2003 0377, filed 1/31/2003. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date

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of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required.

Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

***Specification***

4. The disclosure is objected to because of the following informalities: On p. 9, ¶3, line 2, “tract” should be replaced with “track”.

Appropriate correction is required.

***Claim Objections***

5. Claims 1-5 & 7-11 are objected to because of the following informalities: The claims lack transitional phrases (i.e. comprising the following steps). In general, an exemplary claim for applicant to consider might read “A cryptographic procedure performed by a device comprising the steps of: encrypting data...”; this claim has essential elements to a claim such as a transitional phrase (“comprising the steps of”), tangible embodiment so that the process is not an abstract idea (“performed by a device”), and a concrete, useful and tangible result (“encrypting data” inherently produces an encrypted result). While specific notes will be made in this action, Applicant is directed to the above sample claim and cited patents for general form.

6. Claim 6 must be re-written to one sentence only.

7. Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-11 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- a. Regarding claims 1-10, the claims are directed to a crypto algorithm, which is an abstract idea, not tangibly embodied.
- b. Regarding claims 7-11, the claims do not appear to produce a tangible result.
- c. Claim 8 is rejected under 35 U.S.C. 101 because the claimed recitation of a use (of an algorithm with encryption processes), without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).
- d. Claim 10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use (of real time intervals, electronic cycles each assigned an arbitrary time value or software virtual time), without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).
- e. Regarding claim 11, the claim is directed to "any other techniques" which are abstract ideas.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 6-7 & 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the claims recite “inserts Time Intervals in between the computer bits”, “adds Time Intervals between two consecutive “one’ bits”, etc. (claim 6), processing data using “bit (one)-Time Interval –bit (one)” (claim 7) and “choose time intervals to be inserted between computer bits” (claim 9). However, the specification does not describe how the time intervals are inserted in between two bits. The specification on p. 18 discloses:

“Our byte is de-coded by reversing the sequence of coding. If our data is stored on an appropriate device that can handle the Timary Code such as a magnetic tape running at a constant rate, the user fills into the decoder device or program the same Time Intervals assigned to a, b, c, d, e, f, and g when the text was coded. The decoder “gate” opens only at these intervals.”

The Examiner believes this implies that the insertion of time intervals (at least in this case) might comprise delaying the writing of the next bit by the amount of the time interval when “encoding” or recording the data, but as the specification does not describe this or give examples, it is not enabling as to how the time intervals are inserted.

12. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an algorithm for encoding bits by inserting time intervals between the bits, does not reasonably provide enablement for “any other techniques that might be obtained through the idea of signal timing to encrypt data”. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the

invention commensurate in scope with these claims. This is primarily because the claim is claiming subject matter which is (by the claim) "other" than what is being disclosed.

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 1-2, 4, 6-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

f. Claim 1-2, 4, 6-11 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited. In general, an exemplary claim for applicant to consider might read "A cryptographic procedure performed by a device comprising the steps of: encrypting data..."; this claim has essential elements to a claim such as a transitional phrase ("comprising the steps of"), tangible embodiment so that the process is not an abstract idea ("performed by a device"), and a concrete, useful and tangible result ("encrypting data" inherently produces an encrypted result). While specific notes will be made in this action, Applicant is directed to the above sample claim and cited patents for general form.



g. Regarding claim 1, the scope is unclear because the language following "can be" is not necessary and therefore it is unclear what is being claimed.

h. Regarding claim 2, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Further, the limitation "0,1 Binary code" is unclear because the language suggests something other than standard binary code. It is understood that this limitation means "binary code" as one of ordinary skill would use.

i. Regarding claim 4, the limitation "the computer bits" lacks sufficient antecedent basis (the phrase "the computer bits" (or similarly, "said computer bits") implies reference to a previous recitation of "computer bits", none of which is found in this claim. It is understood that this limitation is read "computer bits".

j. Regarding claim 6, the limitation "for encrypting computer bytes" renders the claim indefinite because it is unclear what limiting factor this imposes on the claim. It is understood that this limitation could be removed leaving only "designates time intervals" as step b and leaving the scope of the claim unchanged.

k. The term "appropriate" in claim 6 (c) is a relative term which renders the claim indefinite. The term "appropriate" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

l. Regarding claim 6, the limitation "the computer bits" (step f) lacks sufficient antecedent basis (the phrase "the computer bits" (or similarly, "said computer bits") implies reference to a previous recitation of "computer bits", none of which is found in

this claim. It is understood that this limitation is read “the individual bits”, which was previously recited in step a.

m. Regarding claim 6, the limitation “electronic ‘0,1’ codes” (step h) is unclear. It is understood that step h should be read as “drops the “zero” bits out of the bits” (because step g refers to ““one” bits”). As is used in step g, and as suggested for step h, “one” bits or “zero” bits is understood to mean a bit of value ‘1’ or ‘0’, respectively.

n. Regarding claim 6, the limitation “bit (one)-time interval –bit (one)” (step i) is unclear because it is unclear if “bit (one)” means a bit of value ‘1’ or means a single bit.

o. Regarding claim 6, the limitation “can re-insert” (step j) is not a method step, but rather a capability. Therefore it is unclear how this capability limits the claim.

p. Regarding claim 6, the limitation “bit (1)-time interval –bit (1)” (step k) is unclear because it is unclear if “bit (one)” means a bit of value ‘1’ or means a single bit.

q. Regarding claim 6, the limitation “can decode” (step k) is not a method step, but rather a capability. Therefore it is unclear how this capability limits the claim.

r. Regarding claim 6, the limitation “can insert” (step l) is not a method step, but rather a capability. Therefore it is unclear how this capability limits the claim.

s. Regarding claim 6, the limitation “ “nonsense” one bits” (step l) is unclear as it is unclear what renders a bit a nonsense bit. Further it is unclear if “one bits” means bits of value ‘1’ or means single bits.

t. Regarding claim 6, the limitation “each encrypted byte, word, set of words” is unclear for several reasons. First, there is no previous recitation of an encrypted byte, word or set or words or an encryption which would produce such structures. Further, it is

unclear if these limitations are in the alternative (i.e. each encrypted byte, word or set of words) or not (i.e. each encrypted byte, word and set of words).

u. Regarding claim 7, the limitation “that allows” renders it unclear whether the limitations that follow are required for the claim or not (i.e. it might be allowed, but not actually required for the invention).

v. Regarding claim 7, the limitation “stored, transmitted, processed, etc” is unclear. First, it is unclear if these limitations are in the alternative (i.e. stored, transmitted or processed) or not (i.e. stored, transmitted and processed). Further, the word “etc” renders the claim indefinite because it is unclear what the claim excludes.

w. Regarding claim 7, the limitation “bit (one)-time interval –bit (one)” is unclear because it is unclear if “bit (one)” means a bit of value ‘1’ or means a single bit. Further the language “using the bit (one)-Time interval –bit (one)” lacks sufficient antecedent basis. Further, the above limitation lacks a modifier such as “bit (one)-time interval –bit (one) coding process” or “bit (one)-time interval –bit (one) format”.

x. Regarding claim 8, the limitation “can be used” is unclear. It is unclear what the claim includes and excludes and everything following the above limitation is optional. Thus is it unclear what the claim is claiming.

y. Regarding claim 8, the phrase “such as” renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Further, the word “etc” renders the claim indefinite because it is unclear what the claim excludes.

- z. Claim 8 provides for the use of the algorithm with encryption processes, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
  - aa. Regarding claim 9, the language “that allows” renders the claim indefinite because it is unclear what the algorithm itself requires, as opposed to what it allows.
  - bb. Regarding claim 9, the limitation “the user” lacks sufficient antecedent basis. It is understood that this limitation is to be read “a user”.
  - cc. Regarding claim 10, the limitation “that uses” renders the claim indefinite because it is unclear how the algorithm uses the items.
  - dd. Claim 10 provides for the use of real time intervals, electronic cycles each assigned an arbitrary time value or software virtual time, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
  - ee. Regarding claim 11, the claim recites “any other techniques obtained through the idea of”. This type of language is indefinite because it is unclear what is included or excluded (if anything) by the language.
15. Note that all claims addressed below are addressed as best understood in light of the rejection(s) and objection(s) above. Further, any claim rejected above, but not specifically addressed is rejected based on its depending from a rejected claim.

***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 1, 3-5 & 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Handbook of Applied Cryptography by Menezes et al. (**Menezes**).

Regarding claim 1, Menezes discloses a crypto algorithm (RC5 block cipher, p. 269, §7.7.2) that can be implement using crypto software, crypto hardware or both (p. 269, §7.7.2, line 2) to encrypt (p. 270, Algorithm 7.115) and decrypt (p. 270, Algorithm 7.117) data and files (plaintext M, p., 270, Algorithm 7.115).

Regarding claim 3, Menezes discloses a crypto algorithm (p. 259, FEAL, §7.5) that encrypts and decrypts bytes of any number of bits (p. 259, §7.5, ¶2).

Regarding claim 4, Menezes discloses a crypto algorithm (password salting, p. 393, §10.2.3, #1) that uses a timing of signals (clock signals in a computer, p. 393, §10.2.3, #1) and computer bits (56-bit user password, p. 393, §10.2.3, ¶1) to encrypt data (zero bits, §10.2.3, ¶1).

Regarding claim 5, Menezes discloses a crypto algorithm (stream cipher, p. 20, §1.5.4) that encrypts and decrypts bytes (blocks, p. 20, §1.5.4) from beginning to end or vice versa (p. 20, Definition 1.38 discloses  $c_i = E_{e_i}(m_i)$  and  $m_i = D_{d_i}(c_i)$ ). Further, Menezes discloses a crypto algorithm (block cipher in ECB mode, p. 228, Algorithm 7.11) that encrypts and decrypts

bytes (plaintext blocks, p. 228, Algorithm 7.11) from beginning to end or vice versa (beginning to end, p. 228 Algorithm 7.11,  $1 \leq j \leq t, c_j \leftarrow E_K(x_j)$  and  $1 \leq j \leq t, x_j \leftarrow E_K^{-1}(c_j)$ )).

Regarding claim 8, Menezes discloses a crypto algorithm that can be used in combination with other encryption processes such as byte shifts, mathematical formulas, etc. (p. 259-261 discloses that FEAL, Algorithm 7.94, is used in combination with the key schedule algorithm, Algorithm 7.95).

18. Claims 7 & 10-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Wireless Security Models, Threats, and Solutions by Lekkas et al. (**Lekkas**).

Regarding claim 7, Lekkas discloses an algorithm (TDMA, p. 21, ¶2) that allows data to be transmitted using bit (one)-time interval –bit (one) (p. 22, Fig. 1-7 discloses a transmission of 8 bits, specifically the final bit in slot 1, and 8 more bits, specifically the first bit in slot 3, such that the final bit of time slot 1 and the first bit of time slot 3 (separated by the time interval between the two consisting of at least the duration of time slot 2) meet the bit –time interval – bit limitation. Also see p. 19, §Spread Spectrum for a general explanation, specifically disclosure of the sender/receiver each having a sequence which shows when data is being transmitted.

Regarding claim 10, Lekkas discloses an algorithm (TDMA, p. 21, ¶2) that uses real time intervals (intervals between time slots 1 and 3, pp. 21-22 and specifically Fig. 1-7). Also see p. 19, §Spread Spectrum for a general explanation, specifically disclosure of the sender/receiver each having a sequence which shows when data is being transmitted.

Regarding claim 11, Lekkas discloses a technique (TDMA, p. 21, ¶2) that uses signal timing (intervals between time slots 1 and 3, pp. 21-22 and specifically Fig. 1-7) to encrypt data

(pp. 19-20, §Spread Spectrum for a general explanation, specifically disclosure of the sender/receiver each having a sequence which shows when data is being transmitted, i.e. the sequence is transmitted in an encrypted format because the hop sequence is available only to the specified sender/receiver combination).

19. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by “Frick Quantumtalk Version 1.4x Installation Guide” by **Frick**.

Regarding claim 9, Frick discloses an algorithm (encoding data for transmission from Qtalk, p. 4, §Program Execution) that allows the user to choose time intervals to be inserted between computer bits (allows the user to choose Baud Rate, p. 4, Coms Setup screen, which is the bits per second transmission rate).

***Potential Allowable Subject Matter***

20. As currently recited and as best understood in light of the rejections above, the art of record appears to neither read upon claim 6 nor does the claim appear to be an obvious variation of the art of record; specifically, the prior art does not teach splitting bytes into bits, designating time intervals for each byte, arranging the time intervals in a specific order, assigning numerical values for the time intervals, inserting the time intervals between two consecutive bits of value ‘1’, dropping bits of value ‘0’ and inserting bits of value ‘1’ before and/or after each encrypted byte. Therefore, in it’s current state, no rejection based on prior art is given for the claim. However, based on the above rejections under 35 U.S.C. §101 and 35 U.S.C. §112, the claim is not in condition for allowance.

*Conclusion*

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

ff. The '545 patent reference is cited for teaching PPM (pulse position modulation) where the position of bits in a stream (pulses) are change based on a modulation pattern

gg. The '966 patent reference is cited for teaching inserting random bit values between bit values of a message (inserting time intervals between bits of the real message) (Fig. 11C).

hh. The '931 patent reference is cited for teaching time division multiplexing, where pieces of a message shifted in time for transmission.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (571) 272-3841. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Simitoski  
/Michael J. Simitoski/  
June 18, 2007